U.S. Department of the Interior
Bureau of Land Management
Kremmling Field Office
P O Box 68
Kremmling, CO 80459

ENVIRONMENTAL ASSESSMENT

NUMBER: DOI-BLM-LLCON02000-2014-0025-EA

PROJECT NAME: EE3 Application for Permit to Drill (APD) Horizontal Well Mutual 4-30H

LEGAL DESCRIPTION: .

Surface Hole Location (SHL): 6th PM, SW¼, SE¼, Sec. 30, T.7N., R.80W.
Bottom Hole Location (BHL): 6th PM, Lot 4, Sec. 31, T.7N., R.80W.

JACKSON COUNTY

CASEFILE/PROJECT NUMBER: COC62063

APPLICANT: EE3, LLC.

Background/Introduction: The Federal mineral estate administered by the Bureau of Land Management (BLM) as part of its mineral leasing program provides minerals, including fossil fuels, for the benefit and use of the American public and encourages development of domestic oil and gas reserves to reduce dependence on foreign energy supplies. Mineral development is supported by the Mineral Leasing Act (1920 30 USC 181 et. seq.) and the Federal Land Policy and Management Act (FLPMA).

An Application for Permit to Drill (APD) was received as follows:

- Mutual 4-30H APD was received on June 27, 2013.
- The proposed SHL for the well is on private surface, overlying both federal (coal only) and private minerals. The well would be directionally drilled from the surface hole location to the bottom hole location.
- Production would pass through two Fee leases and BLM Lease COC62063.
- An on-site review is deemed not necessary for the application to be analyzed and processed.
- Internal review of the application was examined by BLM Kremmling Field Office (KFO) staff specialists Bill Wyatt, Archeologist; Darren Long, Wildlife Biologist; Hannah Schechter, Visual Resources; Paula Belcher, Hydrologist; and Kelly Elliott, Natural

Resource Specialist. Doug Sandridge represented EE3. Letters were also sent to five American Indian tribes.

The components required of a complete APD package were adequately met for the BLM to begin reviewing and processing the application.

PURPOSE AND NEED FOR THE ACTION: The BLM received an APD for the Mutual 4-30H from EE3 for a well location on private surface estate to explore for and develop oil and gas reserves in the United States. Lease development was essentially guaranteed when the leases were issued [Mineral Leasing Act of 1920, 30 USC 181 et. seq., as amended, and the Federal Land Policy and Management Act (FLPMA)]. Federal leases are issued for an initial term of 10-years and are valid indefinitely as long as capability to produce in paying quantities is maintained, either on a leasehold basis or on a unit basis (if the lease is contained in an approved oil/gas unit).

The BLM is preparing the Environmental Assessment (EA) to address potential impacts associated with approval of EE3's APD. If approved, it would further BLM's objective contained in the 1991 Oil and Gas Leasing and Development Environmental Impact Statement/Record of Decision (EIS/ROD) to: "Facilitate orderly, economic, and environmentally-sound exploration and development of oil and gas resources using balanced multiple-use management.

It is the intent of the applicant to exercise their lease rights to occupy as much of the lease surface as is reasonable for the exploration and extraction of oil and gas.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

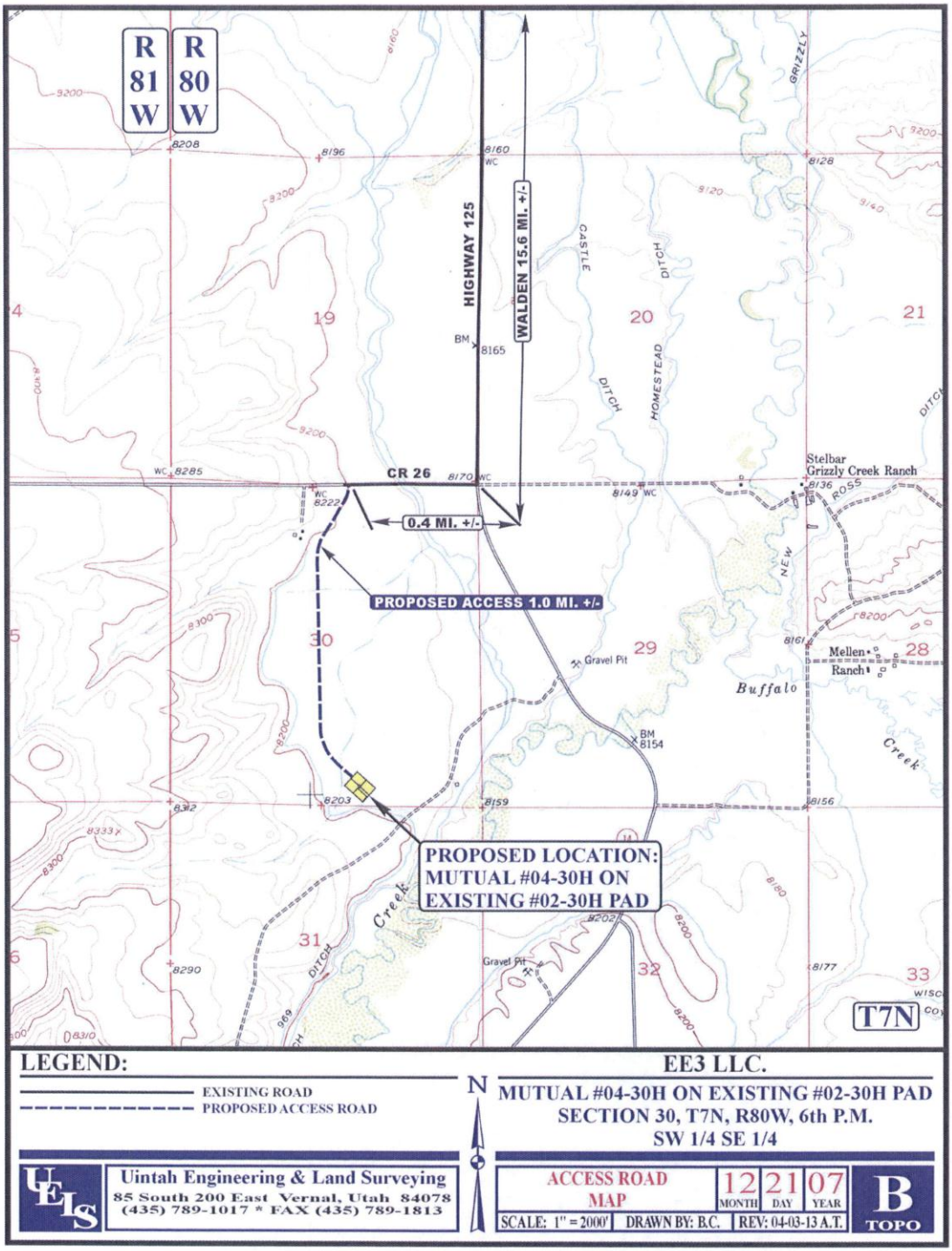
PROPOSED ACTION: EE3, LLC (EE3) proposes to drill one new horizontal oil/gas well in Jackson County, Colorado in 2014. The proposed well location would be as follows;

- **Mutual 4-30H** well would be on private-administered surface and fee and federal mineral estate, located in T. 7N., R. 80W., Sec. 30 (SWSE). The well would be drilled on a previously constructed pad and share the location with a private well, the Mutual 2-30 H. No new surface disturbance would be required on the pad's location or the access road.

See map below.

The standard Conditions of Approval are incorporated as part of the Proposed Action and included as Attachment #1. The surface-use plan provided by EE3 is incorporated by reference as part of the Proposed Action. There is no new surface disturbance expected as an existing well pad and access road is being used for the proposed well.

Map: Mutual 4-30H Well



Well	Existing Well pad Disturbance (Acres)	Max Vertical Cut (ft.)	Existing Road disturbance (Lin. ft.)	Existing Road Disturbance (Acres)	Total site disturbance (Acres) As Built	Anticipated Water Depletion plus dust abatement
Mutual 4-30H	3.7	11.8*	4,945	3.5	7.2	13,748 barrels (bbls)

*Note: The max vertical cut depth includes the total pit depth; it is not reflective of the true cut and fills for the pad (i.e. the maximum cut for the Mutual 4-30H pad is 1.7 ft., with the pit then constructed within the cut area.)

Design features of the Proposed Action for the Mutual 4-30H well site (summarized from EE3's Surface Use Plan, available at the Kremmling Field Office):

- Existing well pad dimensions are approximately 400' x 305'.
- An access road would not be required as there is an existing road leading to the Mutual 2-30H. The access road is located on private surface and would be maintained, and improved as necessary, to meet the minimum road standards found in The Gold Book and BLM 9113 - Roads Manual.
- The road would remain until wells are abandoned, at which time depending on the surface owners' preference, it would be obliterated and the road and pad area reclaimed. Topsoil must be of an adequate volume to spread to a minimum of 6" depth at final reclamation.
- All permanent above-ground structures constructed or installed on location and not subject to safety requirements would be painted Shale Green.
- The well pad would require a reserve pit. Reserve pit dimensions would be approximately 205' x 110', 10' deep, with a 1.5:1 slope. The reserve pit would be lined with a 12-mil or thicker synthetic liner.
- The reserve pit would be utilized during drilling operations and would be fenced on three sides during drilling operations; the fourth side would be fenced after the drilling rig moves off location. Cuttings and drilling fluids would be contained in the reserve pit. Pit would be closed and reclaimed within six months of the completion date following drilling and completion activities (weather permitting). If natural evaporation of the reserve pit is not feasible, alternative methods of drying, removal of fluids, or other treatment may be utilized. If fluids would be disposed of by any method other than evaporation, then they would be hauled to a Department of Environmental Quality (DEQ) authorized disposal site, prior approval from the Authorized Officer will be obtained.
- All human waste, garbage and non-flammable waste materials would be contained and disposed of at a state-approved disposal site.
- EE3 would maintain a file of all MSDS for all chemicals, compounds and/or substances which are used during the course of construction, drilling, completion and production operations for the proposed well.
- EE3 would maintain an Emergency Response Plan which includes notifying the BLM of all reportable spills of oil, produced water and hazardous substances.

- Fresh water would be obtained from the Buffalo Creek, point of diversion, located in Section 28, T. 7N. R. 80W. (NW/SW), via an independent water hauler. EE3 estimates 10,000 bbls of Upper North Platte River Basin water would be required for drilling operations based on comparable historic use. If dust abatement is required, EE3 anticipates 3,748 bbls.
- Interim reclamation of the location and reserve pit would be done within six months after completion or plugging operations are finished (weather and wildlife stipulations permitting). The pit would then be backfilled with no less than five feet of soil material and would be mounded over to allow for settling of the soil.
- All disturbed, unused areas would be seeded. If drilled, the drill would be equipped with a depth regulator and seed would be planted between one-quarter and one-half inch deep. If broadcasted, the rate would be doubled (see attached seed mixture).
- Monitoring would be conducted by a qualified Operator representative (in coordination with the BLM) following initial rehabilitation work. Monitoring areas would be re-examined at the end of the first growing season.
- Construction activities would not be conducted when soils are frozen, saturated, or during periods when watershed damages are likely to occur.
- If the proposed access road and well pad are dry during construction, drilling and completion activities, then water would be applied to help facilitate soil compaction and to minimize soil loss as a result of wind erosion.
- Weeds would be controlled on disturbed areas within the exterior limits of the access road and well pad. Approval would be obtained from the Authorized Officer prior to use of pesticides.

No Action Alternative: The No Action Alternative would deny EE3 the proposed well development on the currently existing pad and its associated access road.

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):
The Proposed Action is subject to the following plan:

Name of Plan: Kremmling Resource Management Plan, Record of Decision (ROD)

Date Approved: December 19, 1984 (Updated June 1999), and as amended by Record of Decision on December 5, 1991 as described in the Colorado Oil and Gas Leasing and Development Final Environmental Impact Statement (O&G EIS).

Decision Number/Page: ROD (map 3, p. 14)

Decision Language: To facilitate orderly, economic and environmentally sound exploration and development of oil and gas resources using balanced multiple-use management (ROD, p.11). Important wildlife habitat will be protected with the use of no surface occupancy, timing limitations or controlled surface use stipulations and /or lease notices on oil and gas leases, and conditions of approval (COA) on permits (ROD, p. 3).

Decision Number/Page: II-B-12 pg.14

Decision Language: Provide the opportunity to utilize public lands for development of facilities which benefit the public, while considering environmental and agency concerns.

AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES

Standards for Public Land Health: In January 1997, the Colorado BLM approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, special status species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental analysis (EA). These findings are located in specific elements listed below.

Cumulative Effects Analysis Assumptions: Cumulative effects are defined in the Council on Environmental Quality (CEQ) regulations (40 CFR 1508.7) as "...the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." Table 1 lists the past, present, and reasonably foreseeable future actions within the area that might be affected by the Proposed Action; for this project the area considered was the Natural Resources Conservation Service's (NRCS) 5th Level Watershed Grizzly Creek. However, the geographic scope used for analysis may vary for each cumulative effects issue and is described in the Affected Environment section for each resource.

Table 1. Past, Present, and Reasonably Foreseeable Actions

Action Description	STATUS		
	Past	**Present**	**Future**
Livestock Grazing	X	X	X
Recreation	X	X	X
Invasive Weed Inventory and Treatments	X	X	X
Spring or Water Developments	X	X	X
Wildfire and Emergency Stabilization and Rehabilitation	X	X	X
Wind Energy Met Towers			X
Oil and Gas Development: Well Pads Access Roads Pipelines Gas Plants Facilities	X	X	X
Power Lines	X	X	X
Oil Shale	X	X	X
Seismic	X	X	X
Vegetation Treatments	X	X	X

The geographic scope for the cumulative impact analysis is Jackson County. The 1991 Colorado Oil and Gas Leasing Final Environmental Impact Statement (O&G EIS) forecasted, for Kremmling Field Office, a total of 225 wells, of which 108 development and wildcat wells would be drilled on BLM lands (Appendix B, B20 & 21). Cumulative impacts for this forecasted development were analyzed in the O&G EIS based upon oil and gas surface disturbance totaling 2044 acres (Appendix B-2).

In regards to past actions regarding oil and gas activity, oil and gas was first discovered in northeastern Jackson County in 1926 by Continental Oil Company. This discovery marked the beginning of oil and gas development in the North McCallum Field. In 1952, oil was discovered in the Coalmont area southwest of Walden. Since that time, 13 fields have been discovered and developed, all in the North Park (Jackson County) area. Within these 13 fields, approximately 475 wells have been completed and approximately 50% of these wells were completed as dry holes.

In regards to present actions, there has been recent interest in the Coalmont Niobrara formation in southern Jackson County. To date, there are 24 approved drilling permits for Jackson County, of these there have been several wells (three to seven) drilled on private surface and two on federal surface.

In regards to future actions, there are approximately 12 additional wells planned for development within Jackson County. When added to the impacts of all of the other actions in Jackson County, the cumulative impacts from this proposal are well within the 1% cumulative surface impacts projected for the Resource Area in the O&G EIS.

Affected Resources:
The CEQ Regulations state that NEPA documents "must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail" (40 CFR 1500.1(b)). While many issues may arise during scoping, not all of the issues raised warrant analysis in an environmental assessment (EA). Issues will be analyzed if: 1) an analysis of the issue is necessary to make a reasoned choice between alternatives, or 2) if the issue is associated with a significant direct, indirect, or cumulative impact, or where analysis is necessary to determine the significance of the impacts. Table 2 lists the resources considered and the determination as to whether they require additional analysis.

Table 2. Resources and Determination of Need for Further Analysis

Determination[1]	Resource	Rationale for Determination
Physical Resources		
PI	Air Quality	See the Air Quality section of this environmental assessment.
NI	Geology and Minerals	Onshore Order #2 requires that the proposed casing and cementing programs shall be conducted as approved to protect and/or isolate all usable water zones and prospective mineral zones. Geologic and engineering reviews are completed to ensure that cementing and casing programs are adequate to protect all downhole resources. Known water bearing zones are protected by drilling requirements and, with proper practices, contamination of ground water resources is highly unlikely. Proper practices, drilling requirements, casing along with cement would ensure that drilling fluids remain within the well bore and do not enter groundwater.
NI	Soil Resources*	The Proposed Action helps minimize soil disturbances by using an existing road and pad. The proposed action does require a new reserve pit, but the pit is located on previously disturbed soil. There would be no measurable new disturbances to soil resources. Under the No Action Alternative, the proponent would not co-locate the proposed well with an existing well. The applicant could propose a new APD, with associated new soil disturbances for a well and road to develop their lease.
NI	Surface and Ground Water Quality*	There would be no new surface disturbances that would impact surface water quality from the proposed action. Federal and state regulations protect surface and ground water quality from oil and gas development, by requiring protection of freshwater zones during well drilling and completion stages. There is a private well located in the SWSW of Section 30 that is used for domestic and livestock water. The well is 205 feet deep, as are most wells in the area. The proposed drilling program would protect these shallow zones of groundwater. Under the No Action Alternative, there is a potential for additional disturbances if the applicant pursues development of the lease with new pads and wells, which could increase potential surface water impacts.
Biological Resources		
NI	Wetlands and Riparian Zones*	The Proposed Action is location in an upland area and would not impact any wetland or riparian zone. Under the No Action Alternative, there would be no impact to wetland/riparian resources either.

Determination[1]	Resource	Rationale for Determination
NI	Vegetation*	The Proposed Decision would have no impact on vegetation as it is on previously disturbed, existing site in either alternative.
NI	Invasive, Non-native Species	The Proposed action would have no significant impact on invasive, non-native species as little to no disturbance is anticipated. Presently there are no inventoried invasive species within the project area as it is privately owned. See attached standard stipulations (Attachment#1) for mitigation criteria.
PI	Special Status Animal Species*	The proponent (EE3) would comply with the ESA and the PRRIP by either becoming a member of SPWRAP or by applying to the JCWCD to use a portion of the District's industrial water allocated in the interstate decree.
PI	Special Status Plant Species*	See analysis for special status plant species
NI	Migratory Birds	Existing infrastructure is currently adequate and would not contribute to additional loss of habitat. With the current COA, All new production equipment which has open-vent exhaust systems would be constructed in such a way as to prevent the entry and perching of birds and bats, there should be no impact to migratory birds.
NP	Aquatic Wildlife*	The Proposed Action is location in an upland area and would not impact aquatic species. Under the No Action Alternative, there is a potential for additional disturbances if the applicant pursues development of the lease with new pads and wells, which could increase potential surface water impacts and negatively affect aquatic wildlife indirectly.
PI	Terrestrial Wildlife*	See analysis for terrestrial wildlife
Heritage Resources and the Human Environment		
NP	Cultural Resources	The action is not a Section 106 action that would affect known or unknown cultural resources. The horizontal well would pass through BLM minerals, deep subsurface without the potential to affect historic properties. Because the action would not affect cultural resources, SHPO concurrence is not necessary. The proposed action is a no effect, there are no historic properties that would affected.
NI	Paleontological Resources	This action is on private land, no paleontological survey requirement is required.
NP	Native American Religious Concerns	Tribal consultation was initiated on the original action on May 9, 2008. No tribe has identified any area of traditional cultural or spiritual concern. The proposed action would not affect unknown or known traditional cultural properties.
NP	Visual Resources	Visual Resources are not managed by the BLM on private surface, therefore, they are not present.
PI	Hazardous or Solid Wastes	See analysis for Hazardous or solid wastes
NP	Fire Management	The proposed action would have no impact on Fire regime condition class and though more human activity in remote areas can show an increase in wildfire ignitions prior actions similar to the proposed action have not shown an increase in wildfire ignitions.
NI	Social and Economic Conditions	There is always an economic benefit to the county when wells are drilled and the State when production occurs. No financial benefit would be gained with the No Action Alternative.
NP	Environmental Justice	According to the most recent Economic Census Bureau statistics (2009), there are minority and low income communities within the

Determination[1]	Resource	Rationale for Determination
		Kremmling Planning Area. There would be no direct impacts to these populations.
NP	Cadastral	All activity on private lands.
Resource Uses		
NP	Forest Management	Implementation of the proposed action would take place on private land not occupied by forest resources. There would be no impact on forest management on BLM-managed public land as a result of implementing the proposed action or the no action alternative.
NI	Rangeland Management	The proposed action would have no impact on Rangeland Management BLM administered lands as it is on private land.
NI	Floodplains, Hydrology, and Water Rights	The proposed well is outside of the floodplain and would not affect its functionality. There are no anticipated impacts to surface or groundwater hydrology from the proposed action. The applicant is using private water rights and is responsible for complying with the state's water right laws.
NP	Realty Authorizations	There are no rights-of-way, leases or permits at the location of the proposed action as it is private land.
PI	Recreation	See Recreation analysis.
NP	Access and Transportation	The proposed action occurs on and is accessed entirely on private lands and has no impacts to Access or Transportation on BLM-administered lands.
NP	Prime and Unique Farmlands	There are no Prime and Unique Farmlands within the project area.
Special Designations		
NP	Areas of Critical Environmental Concern	There are no Areas of Critical Environmental Concern in the proximity of the proposed project area.
NP	Wilderness and Lands with Wilderness Characteristics	There are no Wilderness, Wilderness Study Areas or lands possessing wilderness characteristics in the project area.
NP	Wild and Scenic Rivers	There are no Wild and Scenic Rivers within the project area.
NP	Scenic Byways	There are no Scenic Byways within the project area.

[1] NP = Not present in the area impacted by the Proposed Action or Alternatives. NI = Present, but not affected to a degree that detailed analysis is required. PI = Present with potential for impact analyzed in detail in the EA.
* Public Land Health Standard

AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES:

AIR QUALITY

Affected Environment: The Clean Air Act (CAA), which was last amended in 1990, requires the Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS), codified at 40 Code of Federal Regulations (CFR) Part 50, for criteria pollutants. Criteria pollutants are air contaminants that are commonly emitted from the majority

of emissions sources and include carbon monoxide (CO), lead (Pb), sulfur dioxide (SO2), particulate matter smaller than 10 and 2.5 microns (PM10 and PM2.5, respectively), ozone (O3), and nitrogen dioxide (NO2). Ambient air quality standards must not be exceeded in areas where the general public has access.

The CAA established two types of NAAQS:

Primary standards: Primary standards set limits to protect public health, including the health of "sensitive" populations (such as asthmatics, children, and the elderly).

Secondary standards: Secondary standards set limits to protect public welfare, including protection against decreased visibility, and damage to animals, crops, vegetation, and buildings.

The EPA regularly reviews the NAAQS (every five years) to ensure that the latest science on health effects, risk assessment, and observable data such as hospital admissions are evaluated, and can revise any NAAQS if the data supports a revision. The Colorado Air Pollution Control Commission can establish state ambient air quality standards for any criteria pollutant, and those standards must be at least as stringent as the federal standards. Table 3-1 lists the federal and Colorado ambient air quality standards.

Table 3-1 Ambient Air Quality Standards

Pollutant [final rule citation]		**Standard Type**	**Averaging Period**	**Level**	**Form**
Carbon Monoxide [76 FR 54294, Aug. 31, 2011]		Primary	8-hour	9 ppm	Not to be exceeded more than once per year
			1-hour	35 ppm	
Lead [73 FR 66965, Nov 12, 2008]		Primary and secondary	Rolling 3-month average	0.15 ug/m3	Not to be exceeded
Nitrogen Dioxide [75 FR 6474, Feb 9, 2010]		Primary	1-hour	100 ppb	98th percentile, averaged over 3 years
[61 FR 52852, Oct 8, 1996]		Primary and Secondary	Annual	53 ppb	Annual mean
Ozone [73 FR 16436, Mar 27, 2008]		Primary and Secondary	8-hour	0.075 ppm	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years
Particulate Matter [73 FR 3086, Jan 15, 2013]	**PM2.5**	Primary	Annual	12 ug/m3	Annual mean, averaged over 3 years
		Secondary	Annual	15 ug/m3	Annual mean, averaged over 3 years
		Primary and Secondary	24-hour	35 ug/m3	98th percentile, average over 3 years
	PM10	Primary and secondary	24-hour	150 ug/m3	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide [75 FR 35520, June 22, 2010]		Primary	1-hour	75 ppb	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
Colorado (State Only) [38 FR 25678, Sept. 14, 1973]		Primary and Secondary	3-hour	267 ppb	Not to be exceeded in any 12 month period
		Secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year

Source: National- 40 CFR 50, Colorado- 5 CCR 1001-14. ug/m3= micrograms per cubic meter, ppb= parts per billion, ppm= parts per million.

The CAA and the Federal Land Policy and Management Act of 1976 (FLPMA) require the BLM and other federal agencies to ensure actions taken by the agency comply with federal, state, tribal, and local air quality standards and regulations. FLPMA further directs the Secretary of the Interior to take any action necessary to prevent unnecessary or undue degradation of the lands [Section 302 (b)], and to manage the public lands "in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values" [Section 102 (a)(8)].

The resource area's climate is characterized by long, cold winters and short cool summers with low to moderate precipitation. The prevailing winds are westerly but are greatly affected by local topography. Frequent winds in the area provide excellent dispersion characteristics for anthropogenic emissions. Fluctuations of temperature and precipitation from year to year are often quite dramatic. The temperatures in the project area range from a monthly mean minimum temperature of 3.7 degrees Fahrenheit (^{o}F) in January to monthly mean maximum of 78.2 ^{o}F in July. The area receives an average annual precipitation of approximately 10.6 inches, with May-September average a little over an inch each month. From November through April, the average monthly snowfall is between seven to eight inches.

In general, air quality within an area is influenced by the amount and kind of pollutants that are released (within the area and up wind - dependent upon their chemical and physical properties), and the area's topography or terrain (such as mountains and valleys) and weather (such as wind, temperature, air turbulence, air pressure, rainfall and cloud cover). The Air Pollution Control Division (APCD) of the Colorado Department of Public Health and Environment measures ambient air quality at a number of locations throughout the state. Similarly, several Federal Land Managers (FLMs) like the BLM, FS, and NPS, also monitor air quality for NAAQS and AQRVs to meet organic act requirements. There is limited air quality data for Jackson County where the proposed well would be drilled. Jackson County is not within a nonattainment or maintenance area, as identified by the EPA. There are currently no identified air quality concerns, and based on known general emission levels and information for the area, North Park is considered likely to be meeting air quality standards. The APCD's most recent air quality report (November, 2013) states that all of the Central Mountain area (which includes North Park) complies with National Ambient Air Quality Standards. The primary monitoring concern is with particulate pollution from wood burning and road sanding. Currently, there are no gaseous and fine particulate monitoring sites operated by the APCD in the area.

North Park is bordered by three designated air quality management areas which are Prevention of Significant Deterioration (PSD) Class I areas- the Mt. Zirkel Wilderness Area, the Rawah Wilderness Area, and Rocky Mountain National Park. The proposed well location is approximately 10.5 miles southeast of the Mt Zirkel Wilderness, 25 miles southwest of the Rawah Wilderness Area, and 28.5 miles northwest of Rocky Mountain National Park. There is an air quality monitoring station that has been established near the northern end of the park by the USFWS at the Chandler Ranch Property that measures ozone, sulphur dioxide, carbon monoxide, particulate matter, and nitrogen oxides and a IMPROVE monitoring station in the Mount Zirkel Wilderness that monitors visibility, particulate matters, lead, and sulfur levels. Neither station has exceeded the national standards.

Environmental Consequences (Direct and Indirect Impacts): Based upon the existing data, particulate matter-PM (primarily in the form of fugitive dust during wind events) and regional ozone are the pollutants of concern for the area. The proposed action, however, uses an existing oil and gas pad with an existing road. The surface disturbance of constructing and reclaiming the reserve pit would produce minimal fugitive dust, and would be of short duration. There could be some increase in dust due to increased road use, but the proposed action's use of existing facilities is a best management practice to reduce dust from multiple roads and pads. The emissions' inventory done for the Kremmling Resource Management Plan Revision (RMP) estimated the emissions from the construction of 1 pad as 460.27 lb/yr of uncontrolled PM10 emissions, 69.04 lbs/yr for PM2.5 uncontrolled emissions. Vehicle use, heavy equipment exhaust emissions, and road dust emissions are also estimated per well pad (see Appendix F, pages F-27 to F-32). These emissions are all reduced in this proposed action by using an existing pad and road.

Emission of NOx and VOCs, while unlikely to create localized air quality problems within the general area, are also of concern due to their role in regional ozone formation as precursor gases. Fuel combustion in vehicle engines and equipment produces the reactive organic compounds, nitrogen oxides, carbon monoxide, PM_{10}, $PM_{2.5}$, and GHG emissions. Due to the lack of pipelines in the North Park area, natural gas may be flared until such a time that the infrastructure is constructed. Volatile organic compounds (VOCs) would also be released from the reserve pit or tanks and during completion activities. (see Appendix F).

Cumulative Impacts of the Proposed Action: Even with these increased pollutants, the drilling and development of the proposed well is unlikely to exceed NAAQ and CAAQ standards or other significant impact thresholds. The Air Quality Appendix estimated the emissions within the Coalmont-Niobrara area where the proposed well would be drilled. The emissions were summarized per well (from drilling through completion to production) and for up to 234 wells by the year 2028. A Comprehensive Air Quality Model with Extensions (CAMx) model was used to predict emissions for the KFO RMP. Ozone modeling was performed using cumulative emissions, and results were compared to the current ozone standard of 0.075 parts per million (ppm). Current and projected Design Values are below the 75 ppb ozone NAAQS. In addition, ozone impacts attributable to Project emissions do not extend to any Denver Metro Area Monitoring Sites when comparing future year modeling results with, and without, Project emissions. Based upon the results of this Modeling Analysis, it can be assumed that ozone impacts attributable to the KFO RFD Scenario (BLM 2008r) will also not be expected to cause, or contribute, to violations of the ozone NAAQS.

Air quality management under the RMP requires a condition of approval (COA) of dust-abatement measures to prevent fugitive dust to achieve at least an 80% fugitive dust emission reduction- depending on conditions, this might require watering, surfactants, or surfacing. The proposed fugitive dust control plan is expected to provide at least 80% reduction. Also as part of the RMP, a Comprehensive Air Resource Protection Protocol (CARPP) was prepared for the entire field office. The BLM has committed to tracking actual annual criteria and VOC pollutant emissions from BLM authorized oil and gas activities within the planning area. The BLM will work with CDPHE and the EPA to annually determine if adaptive management strategies are needed to effectively manage air resources.

Research has identified the general potential impacts of anthropogenic greenhouse gas emissions and their effects on global climatic conditions. These anthropogenic GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and several trace gases which differentially absorb and emit thermal radiation in the atmosphere and therefore may contribute to climate change. Current research on climate change impacts is an emerging and rapidly evolving area of science, and given the lack of adequate analysis methods, it is not possible to identify reasonably foreseeable local, regional, or global climate change impacts based on assumed potential GHG emissions from a single well or even from a few wells in an area. Changes in global temperatures and climate vary significantly with time, and are subject to a wide range of driving factors and complex interrelationships, the level of GHG emissions can generally be quantified and compared to overall estimates to provide some measures of the level and significance of any potential impacts. The RMP estimated the maximum annual projected oil and gas greenhouse gas emissions. The total number of wells in North Park by 2028 represent about 0.1% of Colorado's 2007 emission.

Environmental Consequences of the No Action Alternative: The No Action Alternative would result in the proposed well not being drilled, at least not at the proposed location. There is the potential that in order to develop their lease, the proponent would propose a different well location. This well could involve more or less emissions than the proposed, depending if roads or a pad were existing or needed to be constructed.

Mitigation: None

THREATENED, ENDANGERED, AND SENSITIVE SPECIES (includes a finding on Standard 4)

Affected Environment: The Proposed Action is located within the North Platte River basin, which is tributary to the Platte River System. The United States Fish and Wildlife Service (FWS) has determined that any water depletion within the Platte River jeopardizes the continued existence of one or more federally-listed threatened or endangered species and adversely modifies or destroys designated and proposed critical habitat. Depletions may affect and are likely to adversely affect the whooping crane, the interior least tern, the piping plover, the western prairie fringed orchid, and the pallid sturgeon in Nebraska.

Greater Sage-grouse (*Centorcercus urophasianus*): This species is currently listed as a candidate for listing under the Endangered Species Act (ESA). Active leks exists in the near vicinity of the proposed action. A lek site is an area where male birds strut and compete for mates and these locations are considered a focal point for management of the species. The closest active lek site is approximately 1.5 miles from the proposed action. According to Connelly et. al. 2011, 80% of female grouse nest within 4 miles of lek sites when appropriate nesting habitat exists. The proposed action is within 4 miles of several active leks.

Environmental Consequences (Direct and Indirect Impacts): The Platte River Recovery Implementation Program (PRRIP), established in 2006, is implementing actions designed to assist in the conservation and recovery of the target species and their associated habitats along

the central and lower Platte River in Nebraska through a basin-wide cooperative approach agreed to by the States of Colorado, Nebraska, and Wyoming and the U.S. Secretary of the Interior. A programmatic biological opinion was completed on June 16, 2006, that covers new depletions, and in 2009, Jackson County Water Conservancy District (JCWCD) joined the South Platte Water-Related Activities Program (SPWRAP) for ESA coverage under the PRRIP. JCWCD's membership covers agricultural and municipal depletions within the county. The proposed well is estimated to require 13,748 barrels of water which would be about 1.33 acre-ft. of water. The operator would secure private water or municipal water to use for the well. It is the proponent's responsibility to insure they are not injuring any senior water right and that the decreed use includes industrial uses. The proponent would comply with the ESA and the PRRIP by either becoming a member of SPWRAP or by applying to the JCWCD to use a portion of the District's industrial water allocated in the interstate decree.

Greater Sage-grouse (*Centorcercus urophasianus*): Due to the nature of this proposed action, no new surface disturbance is expected by the addition of a new well on the current pad. Current private land conditions at the proposed site do not provide adequate habitat for nesting or any life stages associated with this species. Sage-grouse are expected to avoid this area or occur incidentally during periods of movement between more suitable habitats. Adding a well could effectively increase production and associated activities such as trucking use on existing infrastructure and roads. Little empirical evidence is available on how noise, dust and other air emissions cumulatively associated with the proposed action activities affect this species but are expected to be minimal and in short duration. Down hole effects and associated increased surface activity should be minimal to this species and not contribute to the future listing of greater sage-grouse.

Mitigation: The proponent (EE3) shall comply with the ESA and the PRRIP by either becoming a member of SPWRAP or by applying to the JCWCD to use a portion of the District's industrial water allocated in the interstate decree.

WASTES- HAZARDOUS OR SOLID

Affected Environment: Some potentially hazardous materials would be used during well drilling and maintenance. In addition, solid waste would be generated during these proposed activities.

According to 29 CFR 1910.1200(g), the oil and gas operator is to maintain a file containing Material Safety Sheets (MSDS) for all chemicals, compounds, and/or substances which are utilized during the course of construction, drilling, completion, and production operations of this project. This file is to be available at all times employees are present at the site. Hazardous materials that may be present at the site include drilling mud and cementing products that are primarily inhalation hazards. Flammable or combustible motor fuels would be present. Proprietary materials necessary for well completion and simulation such as acids and corrosives are often used. Human solid and liquid wastes would be generated primarily during the construction and drilling phases of the project.

Environmental Consequences: There would be no direct, indirect, or cumulative impacts from the Proposed Action. However, this is dependent upon responsible use of chemicals and immediate containment and adequate cleanup in the event of a release. Consequences would be dependent on the volume and nature of the material released. In most situations involving hazardous materials, there are ways to remediate the area that has been contaminated.

In the No Action Alternative, if the application were denied, there would be no hazardous materials used and/or released.

Mitigation: None

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: The proposed action is within an area that provides upland habitat for a variety of wildlife species. Large mammals which use the allotments at least part of the year include mule deer, pronghorn, Rocky Mountain elk, moose, black bear, and mountain lions. Small mammals include coyote, red foxes, bobcat, and a variety of small rodents. Mule deer, pronghorn antelope, and elk use the area yearlong with most use occurring during summer. The entire proposed project area is within critical winter range for deer, pronghorn, elk and moose. Black bear and mountain lion use of the allotments occurs sporadically yearlong.

Environmental Consequences (Direct and Indirect Impacts): Down hole actions associated with the proposed action should have no effect to terrestrial wildlife. Adding a well could effectively increase production and associated activities such as trucking use on existing infrastructure and roads. There would be a minor direct loss of suitable wildlife habitat in the area. Indirect impacts to wildlife could result from the increase in human activity during the drilling phase, causing an increase in stress to wildlife or limiting movement throughout the Project Area. Decreased human activity during the production phase would reduce these potential indirect impacts to wildlife as well.

Mitigation: None

MINERALS/FLUID

Affected Environment: The proposed well would be in favorability zone 4 (high potential area for oil and gas). This well would penetrate the Niobrara and Frontier Formations.

Environmental Consequences (Direct and Indirect Impacts): The casing and cementing program would be adequate to protect all of the resources, minerals and fresh water zones. The blowout preventer (BOP) system would be analyzed to ensure Onshore Order No. 2 standards are adequately met.

Under the No Action alternative, there would be no development of fluid minerals and no effects on existing fluid mineral reservoirs.

Cumulative Impacts: Fluid mineral production from the proposed well would contribute to the draining of hydrocarbon-bearing reservoirs within the geological formations in this area, an action that would be consistent with BLM objectives for mineral production.

With the No Action Alternative, there would be no further depletion of the hydrocarbon resources of the targeted formations. In addition, oil and gas would not be available to the national economy and there would be no revenues available to federal, state, and local treasuries from the recovery of oil and gas resources.

Mitigation: None

NOISE

Affected Environment: Sound levels in the project area would vary greatly, depending on proximity to existing residences, roadways, or other sources. These sound levels would fluctuate with variations in weather conditions including temperature, wind, humidity, and the general topography of the area. No background noise studies have been conducted, but the project area is located near Highway 14, with noise disturbance already present.

Environmental Consequences (Direct and Indirect Impacts): There would be a short-term increase in noise levels in the project area while drilling activities occur. The distance to existing residences, the temporary nature of the drilling noise, and the use of quiet electric motors and well lubricated pump-jacks would limit any harmful effects of noise occurring under the Proposed Action.

In the No Action Alternative, if the application were denied, the noise level would not increase.

Mitigation: None

RECREATION

Affected Environment: The proposed action occurs on and is accessed entirely on private lands. The project area is north and adjacent to 840 acres of BLM-administered lands. Dispersed recreation activities in the area include hunting, hiking, viewing scenery and wildlife, driving for pleasure and Off-Highway Vehicle use.

Environmental Consequences (Direct and Indirect Impacts): Due to the proposed action being entirely on private lands there are no direct impacts to Recreation on BLM-administered lands. Drilling activities and the potential for increased activities including maintenance activities, increased travel to and from the site and increased development may displace small and large game and have indirect adverse impacts to hunting and wildlife viewing opportunities on the adjacent BLM-administered lands. This impact may be short term in nature during the development phases. However, since the proposed action occurs on an existing and developed well pad the indirect adverse impacts would be limited compared to having new development occur in an area not developed.

In the No Action Alternative, if all applications were denied, additional development would not occur on the existing developed well pad and there would not be indirect adverse impacts. However, the proposed action location could be proposed in an undeveloped area that may have direct or indirect impacts that are greater.

Mitigation: None.

REFERENCES CITED:

Connelly, J. W., C.A. Hagan, and M.A. Schroeder, 2011. Characteristics and dynamics of greater sage-grouse populations: Pp. 53-67 in S.T. Knick and J.W. Connelly. Greater Sage-Grouse: ecology and conservation of a landscape species and its habitat. Studies in Avian Biology 38. University of California Press, Berkely, CA.

TRIBES, INDIVIDUALS, ORGANIZATIONS, OR AGENCIES CONSULTED: See Attachment 3 for tribes consulted. There were no comments received from the tribes.

INTERDISCIPLINARY REVIEW:

Name	Title	Area of Responsibility	Date Signed
Paula Belcher	Hydrologist	Air Quality; Surface and Ground Water Quality; Floodplains, Hydrology, and Water Rights; Soils; Wetland and Riparian Zones	04/15/2014
Bill B. Wyatt	Archaeologist	Cultural Resources; Native American Religious Concerns; Paleontological Resources	04/11/2014
Neilie Goodwin	Rangeland Management Specialist	Vegetation; Rangeland Management	04/14/2014
Zach Hughes	Natural Resource Specialist	Invasive, Non-Native Species; Vegetation	04/15/2014
Darren Long	Wildlife Biologist	Migratory Birds; Special Status Animal Species; Terrestrial and Aquatic Wildlife; Areas of Critical Environmental Concern; Special Status Plant Species	04/16/2014
Kelly Elliott	Natural Resource Specialist	Hazardous or Solid Wastes; Geology and Minerals	4/18/2014
John Monkouski	Outdoor Recreation Planner	Wilderness; Access and Transportation; Recreation, Noise	4/17/2014
Hannah Schechter	Outdoor Recreation Planner	Visual Resources	04/17/2014
Kenneth Belcher	Forester	Forest Management	04/15/2014
Kevin Thompson	Fire Management Specialist	Fire Management	4/14/2014
Susan Cassel	Associate Field Manager	Realty	4/16/2014

Name	Title	Area of Responsibility	Date Signed
Susan Cassel	Planning & Environmental Coordinator	NEPA Compliance	4/18/2014

ATTACHMENTS:

1. CONDITIONS OF APPROVAL FOR APPLICATIONS FOR PERMIT TO DRILL
2. SEED MIX
3. TRIBAL CONSULTATION LIST

U.S. Department of the Interior
Bureau of Land Management
Kremmling Field Office,
P O Box 68
Kremmling, CO 80459

Finding of No Significant Impact (FONSI)

DOI-BLM-CON02000-2014-0025-EA

BACKGROUND

EE3, LLC (EE3) proposes to drill one new horizontal oil/gas well in Jackson County, Colorado in 2014. The proposed well location would be as follows;

- **Mutual 4-30H** well would be on private-administered surface and fee and federal mineral estate, located in T. 7N., R. 80W., Sec. 30 (SWSE). The well would be drilled on a previously constructed pad and share the location with a private well, the Mutual 2-30 H. No new surface disturbance would be required on the pad's location or the access road.

FINDING OF NO SIGNFICANT IMPACT

Based upon a review of the EA and the supporting documents, I have determined that the Proposed Action is not a major federal action and will not have a significant effect on the quality of the human environment, individually or cumulatively with other actions in the general area. No environmental effects meet the definition of significance in context or intensity, as defined at 40 CFR 1508.27 and do not exceed those effects as described in the Kremmling Resource Management Plan (RMP), Record of Decision (ROD) December 19, 1984; Updated February 1999. Therefore, an environmental impact statement is not required. This finding is based on the context and intensity of the project as described below.

Context

This APD will develop oil and gas resources on federal minerals Lease COC62063 consistent with federal lease rights provided for in the Mineral Leasing Act of 1920, as amended. The project is a site-specific action located on private surface involving BLM administered federal minerals that do not in and of itself have international, national, regional, or state-wide importance.

Intensity

The following discussion is organized around the 10 Significance Criteria described at 40 CFR 1508.27. The following have been considered in evaluating intensity for this Proposed Action:

1. **Impacts that may be both beneficial and adverse.**

   Activities for production and the drilling and completion of the new well would result in noise and human presence that could potentially affect certain resources in the project

area. These effects could include the disruption of wildlife, the dispersal of noxious and invasive weed species, and dust effects from unpaved road traffic. However, the Proposed Action helps minimize soil disturbances by using an existing road and pad. The economic health of the county and the State would improve with additional development in the area if the well is a producer.

2. **The degree to which the Proposed Action affects public health or safety.**

   In complying with the CARPP, BLM will annually review the emissions and pollutants and work with CDPHE and EPA to determine if adaptive management strategies are needed. Construction would create some fugitive dust but the project proponent plans on using water to control emissions when necessary. The small amount of dust and its short duration would not impact air quality in the area. Hazardous wastes should not be a concern, but if a spill does occur, the proponent would be responsible for immediate remediation. There would likely be no impact to public health and safety.

3. **Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.**

   There are no cultural resources, park lands, prime farmlands, wetland, wild and scenic rivers or ecologically critical areas within the project area.

4. **Degree to which the possible effects on the quality of the human environment are likely to be highly controversial.**

   The federal action of issuing a permit to drill for oil and gas resources has been routinely analyzed in site-specific EAs as well as at the EIS level during land use planning. No public comments have been received to indicate the possible effects of the Proposed Action would be controversial.

5. **Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risk.**

   No highly uncertain or unknown risks to the human environment were identified during analysis of the Proposed Action. Risk of harm to human health or the environment would be substantially reduced if the design features and COAs are properly implemented and/or adhered to.

6. **Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.**

   The Proposed Action does not establish a precedent for future BLM actions with significant effects or represents a decision in principle about a future consideration. The federal action of issuing a permit to drill for oil and gas resources has been routinely analyzed in site-specific EAs and discussed in the 1984 Kremmling ROD/RMP.

7. **Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.**

   This action is not related to other actions with individually insignificant but cumulatively significant impacts.

8. **The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.**

   There are no known cultural resources that would be affected by the Proposed Action. Standard cultural conditions of approval would be applied to minimize risk to any previously undiscovered resources.

9. **The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act (ESA) of 1973.**

   There are no endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

10. **Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.**

    Neither the Proposed Action nor impacts associated with it violate any laws or requirements imposed for the protection of the environment.

SIGNATURE OF AUTHORIZED OFFICIAL: _/s/ Susan Cassel_____
Acting Field Manager

DATE SIGNED: 4/18/2014

U.S. Department of the Interior
Bureau of Land Management
Kremmling Field Office,
P O Box 68
Kremmling, CO 80459

DECISION RECORD

PROJECT NAME: EE3 Application for Permit to Drill (APD) Horizontal Well Mutual 4-30H

ENVIRONMENTAL ASSESSMENT NUMBER: DOI-BLM-LLCON02000-2014-0025-EA

DECISION

It is my decision to implement the Proposed Action, as described in the attached EA: DOI-BLM-CO-2014-0025-EA

Mitigation Measures:
The proponent (EE3) will comply with the ESA and the PRRIP by either becoming a member of SPWRAP or by applying to the JCWCD to use a portion of the District's industrial water allocated in the interstate decree.

COMPLIANCE WITH LAWS & CONFORMANCE WITH THE LAND USE PLAN

This decision is in compliance with the Federal Land Management and Policy Act, the Endangered Species Act, and the National Historic Preservation Act. It is also in conformance with the December 19, 1984; Updated February 1999 Kremmling Resource Management Plan (RMP).

ENVIRONMENTAL ANALYSIS AND FINDING OF NO SIGNIFICANT IMPACT

The Proposed Action was analyzed in DOI-BLM-LLCON02000-2014-0025-EA and it was found to have no significant impacts, thus an EIS is not required.

PUBLIC INVOLVEMENT

RATIONALE

The Federal mineral estate administered by the Bureau of Land Management (BLM) as part of its mineral leasing program provides minerals, including fossil fuels, for the benefit and use of the American public and encourages development of domestic oil and gas reserves to reduce dependence on foreign energy supplies. Analysis of the Proposed Action has concluded that there are no significant negative impacts and that it meets Colorado Standards for Public Land Health.

ADMINISTRATIVE REMEDIES

Administrative remedies may be available to those who believe they will be adversely affected by this decision. Appeals may be made to the Office of Hearings and Appeals, Office of the Secretary, U.S. Department of Interior, Board of Land Appeals (Board) in strict compliance with

the regulations in 43 CFR Part 4. Notices of appeal must be filed in this office within 30 days after publication of this decision. If a notice of appeal does not include a statement of reasons, such statement must be filed with this office and the Board within 30 days after the notice of appeal is filed. The notice of appeal and any statement of reasons, written arguments, or briefs must also be served upon the Regional Solicitor, Rocky Mountain Region, U.S. Department of Interior, 755 Parfet Street, Suite 151, Lakewood, CO 80215.

SIGNATURE OF AUTHORIZED OFFICIAL: __/s/ Susan Cassel_____
Acting Field Manager

DATE SIGNED: 4/18/2014

Attachment #1

CONDITIONS OF APPROVAL FOR APPLICATIONS FOR PERMIT TO DRILL (APDs)

Operator: EE3, Inc.

The Bureau of Land Management, Kremmling Field Office, address and telephone contacts are:

Address:	1116 Park Av., Kremmling, CO, 80459
Office Phone:	(970) 724-3000 Fax: (970) 724-3066
Natural Resource Specialist:	Kelly Elliott, Office Phone (970) 724-3015

The Bureau of Land Management, Little Snake Field Office, address and telephone contacts are:

Address:	455 Emerson Street. Craig, CO, 81625
Office Phone:	(970) 826-5000 Fax: (970) 826-5022
Petroleum Engineer:	Bob Hartman, Office Phone (970) 244-3041
Assistant Field Manager	Tim Wilson Office Phone (970) 826-5099

All lease and/or unit operations are to be conducted in such a manner to ensure full compliance with the applicable laws, regulations (43 CFR Part 3160), Onshore Oil and Gas Orders No. 1, 2, 3, 4, 5, 6 and 7, Notice to Lessees, and the approved plan of operations. Approval of this application does not relieve you of your responsibility to obtain other required federal, state, or local permits. A copy of the approved Form 3160-3 and the pertinent drilling plan, along with any advisory narratives and conditions of approval, shall be available at the drillsite to authorized representatives at all times. The operator is considered fully responsible for the actions of his subcontractors.

Your review and appeal rights are contained in 43 CFR 3165.3 and 3165.4.

CONDITIONS OF APPROVAL

STANDARD CONDITIONS

1. The Kremmling Field Office and the Little Snake Field Office (970) 826-5000 will be given 48-hour notification prior to commencing construction and/or reclamation work.

2. Notify Little Snake Field Office at (970) 826-5000 at least **48-**hours in advance to witness running and cementing of surface casing and testing of the BOPE.

3. The notice of spud will be reported orally to the Little Snake Field Office at (970) 826-5000 at least **48-**hours after spudding. This notice shall include spud date, time, details of spud (hole, casing, cement, etc.), API well number, and date the rotary rig was moved on location. If the spudding occurs on a weekend or holiday, wait until the following regular workday to make this report. The oral notice shall be followed by written notification within 5 working days.

4. No hazardous materials, hazardous wastes, or trash will be disposed of on public lands or on private surface overlying the oil and gas lease. If a release does occur, it will be reported to the Kremmling Field Office immediately at (970) 724-3000.

5. The wellsite disturbance area will be brush cleared and topsoil salvaged before any excavation or fill commences.

6. All survey stakes representing the leveled drill pad, the crest of excavations, the toe of embankments, the reserve pit, and the access road will be in place prior to construction. Staking shall include the well location, two 200-foot directional reference stakes, the exterior dimensions of the drill pad, reserve pit and other areas of

surface disturbance, cuts and fills, and centerline flagging of new roads with road flagging being visible from one to the next.

7. Construction activities will not be allowed to commence if the topsoil cannot be separated from the subsoil during adverse environmental conditions (i.e. when soils are frozen or muddy).

8. Surface disturbance and vehicular travel will be limited to the approved location and approved access route. Any additional area needed will be approved in advance.

9. Drainage for runoff water will be provided to divert runoff water away from the reserve pit, cut and fill portions of the well location and the topsoil stockpile. Runoff water that concentrates and forms rills on the well location will be diverted and/or dispersed to prevent erosion of the fill slopes. Any ditches designed to provide runoff drainage will be constructed on a minimal grade and will release water onto undisturbed ground without causing accelerated erosion. The operator will take additional measures if erosion is occurring within the runoff water drainage system.

10. If fossils are discovered during construction or other operations, all activity in the area will cease and the Field Office Manager will be notified immediately. An assessment of significance will be made within an agreed timeframe. Operations will resume only upon written notification by the Authorized Officer.

STANDARD STIPULATIONS

11. If cultural or paleontological resources are discovered during exploration operations under this license, the licensee shall immediately notify the Field Officer Manager and shall not disturb such discovered resources until the Field Officer Manager issues specific instructions.

    a. Within 5 working days after notification, the Field Office Manager shall evaluate any cultural resources discovered and shall determine whether any action may be required to protect or to preserve such discoveries.

    b. The cost of data recovery for cultural resources discovered during exploration operations shall be borne by the licensee, if the licensee is ordered to take any protective measures. Ownership of cultural resources discovered shall be determined in accordance with applicable law.

    c. The operator is responsible for informing all persons who are associated with the operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are encountered or uncovered during any project activities, the operator is to immediately stop activities in the immediate vicinity of the find and immediately contact the Authorized Officer at (970) 724-3000. Within five working days the Authorized Officer will inform the operator as to:

        1. Whether the materials appear eligible for the National Register of Historic Places;

        2. The mitigation measures the operator will likely have to undertake before the identified area can be used for project activities again and,

    d. If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the Authorized Officer will assume responsibility for whatever recordation, and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation costs. The Authorized Officer will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the Authorized Officer that the required mitigation has been completed, the operator will then be allowed to resume construction.

    e. Pursuant to 43 CFR 10.4(g) (Federal Register Notice: Monday December 4, 1995, Vol 60, No. 232) the holder of this authorization must notify the Authorized Officer, by telephone (970) 724- 3000, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects

of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the Authorized Officer.

12. The reserve pit will be designed to exclude runoff water and maintain a 2-foot freeboard between the maximum fluid level and the lowest point of containment. The reserve pit will not be used for disposal of any materials or fluids, except for materials or fluids specifically addressed in the drilling program or having a subsurface origin. If oil or oily substance is in the reserve pit, it must be removed within 30 days after the drilling rig is removed. Netting will be installed if oily substance is present in the reserve pit.

13. The perimeter of the reserve pit and production pits, if any, will be fenced with woven wire with 2 strands of barbed wire, properly spaced, on the top and all held in place by side posts and corner H-braces to inhibit entry by livestock and wildlife. The fence will be maintained until backfilling or removal of facilities occurs.

14. In the event downhole operations threaten to exceed the required 2-foot freeboard, regarding reserve pit fluids, immediate notification will be provided to the Authorized Officer with concurrent steps taken to minimize the introduction of additional fluids, until alternative containment methods can be approved.

15. Reserve pit fluids will be allowed to evaporate through one entire summer season (May-September) after drilling is completed, unless an alternative method of disposal is approved. After the fluids evaporate, the reserve pit mud will be allowed to dry sufficiently to allow backfilling. The backfilling of the reserve pit will be completed within 30 days after dry conditions exist and will meet the following minimum requirements:

    a. Backfilling will be done in such a manner that the mud and associated solids will be confined to the pit and not squeezed out and incorporated in the surface materials.
    b. There will be a minimum of 5 feet of cover, or return to approximate original contour on the pit.
    c. When the work is completed, the pit areas will support the weight of heavy equipment without sinking and over time shall not subside over 6-inch depth.

16. If installed, production facilities will be located on cut portions of the existing drill pad.

17. In the event production is established, all land surfaces that are to remain free of vegetation (roads and well location) will be monitored for and protected from wind erosion; dry powdery soil will be treated to minimize wind erosion.

18. Prior approval is required to remove reserve pit fluids from the reserve pit; a request of this type will need to include the destination of the fluids and if the destination is not a State approved facility, the request will include State approval of the destination. Fluids may be moved to another reserve pit within the same field with verbal approval of the authorized officer.

19. All pits, cellars, rat holes and other bore holes unnecessary for further lease operations, excluding the reserve pit, will be backfilled immediately after the drilling rig is released. Pits, cellars and/or bore holes that remain on location must be fenced as specified for the reserve pit in the applicant's Surface Use Plan.

20. In the event a producing well is established, all new production equipment which has open-vent exhaust systems will be constructed in such a way to prevent the entry and perching of birds and bats.

21. All permanent structures (on-site for six months or longer) constructed or installed (including oil well pumpjacks) will be painted a flat, non-reflective, earthtone color to match the standard environmental colors, as determined by the Rocky Mountain Five-State Interagency Committee. All facilities will be painted within six months of installation. Facilities required to comply with OSHA (Occupational Safety and Health Act) will be excluded.

22. Surface facilities should appear to blend in to the existing landscape to the greatest possible extent. Facilities should not be located on ridgelines or extend above them. Facilities should be minimal in size (or located underground) and colored and texture to blend in with the surroundings.

23. A containment berm must be installed around all storage tanks, including temporary tanks. Compaction and construction of the berm surrounding the tank or tank battery will be designed to prevent lateral movement of fluids through the utilized materials, prior to storage of fluids. The berm must be constructed to contain at minimum 110 percent of the storage capacity of the largest tank within the berm. All loading lines will be placed inside the berm.

24. Control of noxious weeds will be required through successful vegetation establishment and/or herbicide application. It is the responsibility of the lease operator to insure compliance with all local, state, and federal laws and regulations, as well as labeling directions specific to the use of any given herbicide.

RECLAMATION PERFORMANCE STANDARDS

25. The lessee is required to use the reclamation practices necessary to reclaim all disturbed areas. Reclamation will ensure surface and subsurface stability, growth of a self-regenerating permanent vegetative cover and compatibility with post land use. The vegetation will be diverse and of the same seasonal growth as adjoining vegetation. Post land use will be determined by the Authorized Officer but normally will be the same as adjoining uses.

    Reclamation practices which must be applied or accomplished are: re-grading to the approximate original contour, effectively controlling noxious weeds, separating, storing and protecting topsoil for redistribution during final abandonment, seeding and controlling erosion. If topsoil is not present, or quantities are insufficient to achieve reclamation goals, a suitable plant growth media will be separated, stored and protected for later use. Reclamation will begin with the salvaging of topsoil and continue until the required standards are met. Topsoil that is stored for 1 year or longer will be seeded with naturally occurring species to retain topsoil vigor. If use of the disturbed area is for a short time (less than one year), practices which ensure stability will be used as necessary during the project, and reclamation, with the exception of vegetative establishment, will be completed within one year. If use of the area is for greater than one year, interim reclamation is required on the unused areas. Interim reclamation of the unused areas will begin immediately upon completion of the permanent facility(s).

    For both short and long term projects vegetative establishment will be monitored annually. If the desired vegetation is not established by the end of the second growing season, practices necessary for establishment will be implemented prior to the beginning of the next growing season. Interim reclamation, unless otherwise approved, will require meeting the same standards as final abandonment with the exception of original contour.

    Annual reports consisting of reclamation practices completed and the effectiveness of the reclamation will be provided to the Kremmling Field Office. The first report will be due in January following initiation of reclamation practices and annually thereafter until final abandonment is approved.

    There are numerous reclamation practices and techniques that increase the success rate of reclamation and stabilization. With the exception of those stated above, it is the lessee's prerogative to use those they choose to accomplish the objective. Additional site specific mitigations may be specified and required. However, it is recommended that state-of-the-art reclamation, stabilization, and management practices be used to achieve the desired objective in a timely and cost-effective manner.

    The following definitions and measurements will be used to accomplish and determine if reclamation has been achieved:

    Permanent vegetative cover will be accomplished if the basal cover of perennial species, adapted to the area, is at lease ninety (90) percent of the basal cover of the undisturbed vegetation of adjoining land or the potential basal cover as defined in adjacent undisturbed areas.

    Diversity will be accomplished if at least two (2) perennial genera and three (3) perennial species that are adapted to the area make up the basal cover of the reclaimed area in precipitation zones thirteen (13) inches or less. One species will not make up more than fifty (50) percent of the perennial vegetation by basal cover.

Self-regeneration and adaptation to the area will be evident if the plant community is in good vigor, there is evidence of successful reproduction, and the species are those commonly found in the area.

Surface stability will be accomplished if soil movement as measured by deposits around obstacles, depths of truncated areas, and height of pedestalling, is not greater than three tenths (0.3) of an inch and if erosion channels (rills, gullies, etc.) are less than one (1) inch in depth and at intervals greater than ten (10) feet.

If this standard is not met by the end of the second growing season, two alternatives exist depending on the severity of the erosion:

If erosion were greater than two (2) times the allowable amount, corrective action would have to be taken by the responsible company at that time;

If erosion is less than or equal to two (2) times the allowable amount, and it is determined the erosion occurred during vegetative establishment and the site may become stable, no corrective action would be required at that time. Another measurement would be performed a year later to determine if stability standards had been met. If the original measurements have not increased by more than the allowed standard, the standard would be considered met. However, if the increase were greater than the allowed standard, corrective action would be required.

Subsurface stability (mass wasting event) is of concern if disturbance has included excavation over four (4) feet in depth and greater than 10,000 square feet in area on slopes thirty five (35) percent and greater, or on any erosion-prone slope. When these conditions occur, length of liability for reclamation and final abandonment will continue for ten (10) years following re-contouring to original contour or for such time that climatic patterns provide two (2) consecutive years in which measurable precipitation totals at least 120 percent of average from October 1 through September 30, as measured by data averaged from nearby regional weather stations. The Authorized Officer may waive this stipulation, or portions of it. Such waiver will be documented and justified when not applicable, or when objectives are accomplished through another method.

SITE SPECIFIC CONDITIONS

- If the Surface Use Plan, submitted to the Kremmling Field Office as part of the applications, is altered, the authorized officer must be contacted.
- The proponent (EE3) will comply with the ESA and the PRRIP by either becoming a member of SPWRAP or by applying to the JCWCD to use a portion of the District's industrial water allocated in the interstate decree.

REGULATORY REMINDERS

A. This permit is valid for a period of one year from the date of approval. Any requests for extensions must be submitted prior to the end of the one-year period. If the permit terminates, any surface disturbance created under the permit must be rehabilitated in accordance with the approved plan within 90 days of termination, unless otherwise approved by the Authorized Officer. An expired permit may be reinstated at the Authorized Officer's discretion; however, future operations may require a new application be filed for approval.

B. All drilling operations, unless otherwise specifically approved in the APD, must be conducted in accordance with Onshore Oil and Gas Order No. 2; Drilling Operations.

C. All 7-Day Requirement responses are made part of this APD.

D. There shall be no deviation from the proposed drilling and/or workover program as approved, without prior approval from the Kremmling and Little Snake Field Offices. Safe drilling and operating practices must be observed.

E. Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease, which would entitle the applicant to conduct operations thereon.

F. No location will be constructed or moved, no well will be plugged, and no drilling or workover equipment will be removed from a well to be placed in a suspended status without prior approval of the Kremmling and Little Snake Field Offices. If operations are to be suspended for more than 30 days, prior approval for certain well operations must be obtained and notification given before resumption of operations in accordance with 43 CFR 3162.3-2 and 3162.3-4.

G. In the case of newly drilled dry holes or failures, and in emergency situations, oral approval for subsurface abandonment operations may be granted by the Little Snake Field Office. Oral approvals must be confirmed in writing (Notice of Intention to Abandon (Form 3160-5)) within 15 days. Unless the plugging is to take place immediately upon receipt of oral approval, the appropriate resource area must be notified at least 48 hours in advance of the plugging of the well, in order to provide a representative the opportunity to witness plugging operations.

H. Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (Form 3160-4) must be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with Onshore Oil and Gas Order No. 1. Daily drilling reports, a copy of all logs, core descriptions, core analyses, well-test data, geologic summaries, sample descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations (with Form 3160-4) will be filed and sent to the Little Snake Field Office, 455 Emerson Street, Craig, Colorado 81625. Samples (cuttings, fluid, and/or gas) will be submitted only when requested by the Authorized Officer.

I. Section 102 (b) (3) of the Federal Oil and Gas Royalty Management Act of 1982, as implemented by the applicable provisions of the operating regulations at Title 43 CFR 3162.4-1 (c), requires that "not later than the fifth business day after any well begins production on which royalty is due anywhere on a least site or allocated to a lease site, or resumes production in the case of a well which has been off production for more than 90 days, the operator shall notify the authorized officer by letter or sundry notice, Form 3160-5, or orally to be followed by a letter or sundry notice, or the date on which such production has begun or resumed."

The date on which a well commences production, or resumes production after having been off production for more than 90 days is to be construed as follows:

1. For an oil well, the date on which liquid hydrocarbons are first sold or shipped from a temporary storage facility, such as a test tank or the date on which liquid hydrocarbons are first produced into a permanent storage facility, whichever occurs first;

2. For a gas well, that date on which gas is first measured through sales metering facilities or the date on which associated liquid hydrocarbons are first sold or shipped from a temporary storage facility, whichever occurs first. For purposes of this provision, a gas well shall not be considered to have been off production unless it is incapable of production.

If you fail to comply with this requirement in the manner and time allowed, you shall be liable for a civil penalty of up to $10,000 per violation for each day such violation continues, not to exceed a maximum of 20 days. See Section 109(c) (3) of the Federal Oil and Gas Royalty Management Act of 1982 and the implementing regulations at Title 43 CFR 3163.2(e) (2).

J. This APD is approved subject to the requirement that, should the well be successful (completed for production or recompleted for production in a new interval), the Little Snake Field Office must be notified when it is placed in a producing status. Such notification may be provided orally if confirmed in writing, and must be received in the Little Snake Field Office by not later than the 5th business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following information items:

1. Operator name
2. Well name, number, and location

3. Date well was placed on production
4. The lease, or communitized tract, or unit participating area to which the well's production is attributable.

K. A separate Monthly Report of Operations, Form 3160-6, shall be submitted for each lease, unit participating area, or communitization agreement, beginning with the month in which drilling operation commence, in accordance with 43 CFR 3162.4-3. This report shall be sent to Minerals Management Service, Production Accounting Division, P.O. Box 17110, Denver, Colorado 80217.

L. If at any time the facilities located on public lands authorized by the terms of the lease are no longer included in the lease (due to contraction in the unit or other lease or unit boundary change) the BLM will process a change in authorization to the appropriate statute. The authorization will be subject to appropriate rental or other financial obligation determined by the Authorized Officer.

M. All produced liquids must be contained, including the dehydrator vent/condensate line effluent. All production pits must be bermed and fenced.

N. Gas produced from this well may not be vented or flared beyond an initial, authorized test period of 30 days or 50 MMCF following completion, whichever comes first, without the prior written approval of the authorized officer. Should gas be vented of flared without approval beyond the authorized test period, you may be directed to shut the well in until the gas can be captured or approval to continue venting or flaring is granted and you may be required to compensated the lessor for that portion of the gas that was vented or flared without approval which is determined to have been avoidably lost.

O. Produced water from newly completed wells may be temporarily disposed of into the reserve pit for a period of up to 90 days. During the 90-day periods, an application for approval of a permanent disposal method and location will be submitted according to Onshore Order No. 7 for approval.

P. A schematic facilities diagram as required by CFR 43, Part 3162.7-5, shall be submitted to the Little Snake Field Office within 60 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with 3162.7-5(b).

Q. The permit holder is required to use certified weed free hay, straw and mulch on BLM lands in Colorado should the use or storage of hay, straw or mulch be necessary. Any person who knowingly and willfully violates this regulation may be subject to a fine of not more than $1,000 or imprisonment of not more than 12 months, or both as defined in 43 USC 1733(a).

Attachment #2 Seed Mix

Drill Seeding Rate

SEED NAME	Application Rate PLS/Acre	Seeds/SQ. FT.
Grasses		
Western wheatgrass Pascopyrum smithii, variety. Arriba	2.97	7.5
Thickspike Wheatgrass Elymus lanceolatus var. Critana	2.13	7.5
Bluebunch wheatgrass Pseudoroegneria spicata, var. Secar (Alternate var. Goldar)	2.51	7.5
Sheep fescue Festuca ovina, var. Covar	.62	7.5
Totall	8.23	30
Forbs		
Alfalfa var. Ladak	.73	3.5
Big sagebrush Artemesia tridentata ssp. wyomingensis	.06	3.5
Total	.79	7

* Big sagebrush and Alfalfa may be seeded when it would be better for success
* Broadcast seeds at twice the rate

(Seed tags must be submitted to BLM after seeding.)

*** do not seed prior to October 1, to avoid sprouting.**

MULCH

Native Hay or Straw 2,000 lbs. X acres =

-Mulch is optional but it will help reclamation results.
-Must be Certified Noxious Weed Free

Attachment 3

NATIVE AMERICAN TRIBES CONTACTED:

Colorado Commissioner of Indian Affairs
Attn: Ernest House Jr., Exec. Sec.
130 State Capitol
Denver, Colorado 80203

Richard Brannen Sr., No. Arapaho Business Council
Northern Arapaho Business Council
P O Box 396
Fort Washakie, Wyoming 82514

Robert Goggles, NAGPRA Rep.
Northern Arapaho Business Council
328 17 Mile Road
Arapaho, Wyoming 82510

Jo Ann White, THPO Director
Northern Arapaho Tribe
P O Box 396
Fort Washakie, Wyoming 82514

Mr. Norman Tidzump, Hist. Preserv. Officer
Shoshone Tribe
P O Box 1008
Fort Washakie, Wyoming 82514

Ivan Posey, Shoshone Business Council
Shoshone Tribe
P O Box 538
Fort Washakie, Wyoming 82514

Clement Frost, Chairman
Southern Ute Indian Tribe
P O Box 737
Ignacio, Colorado 81137

Neil Cloud, NAGPRA Rep.
Southern Ute Indian Tribe
Box 737, Mail Stop #73
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Curtis Cesspooch, Chairman
Uintah & Ouray Tribal Business Center
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Betsy Chapoose, NAGPRA Rep.
Uintah & Ouray Tribal Business Council
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Ute Mountain Ute Tribe
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